ABSTRACT

A single cell electroporation assembly and method involve delivery of a substance into a single cell. The substance is combined into an electroporation fluid and placed into a container having a distal opening. The distal opening of the container is placed in proximity to a target cell. Electrical pulses are delivered between a first electrode which is at least partially disposed in the container, and a second electrode outside the cell, the cell being positioned between the distal opening and the second electrode. The electrical pulses induce temporary formation of pores in the cell membrane and the substance enters the cell through the pores by passive diffusion or by active electrophoretic motion.